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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,636	04/01/2004	Patrick T. Petruno	10040213-1	1047

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AGILENT TECHNOLOGIES, INC.  
Legal Department, DL 429  
Intellectual Property Administration  
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Loveland, CO 80537-0599

EXAMINER

YU, MELANIE J

ART UNIT PAPER NUMBER

1641

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,636	<b>Applicant(s)</b> PETRUNO ET AL.	
	<b>Examiner</b> Melanie Yu	<b>Art Unit</b> 1641	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/1/04</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 1-12 in the reply filed on January 20, 2005 is acknowledged. Claims 13-20 have been canceled.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 11, the term "test signals" is vague and indefinite because it is unclear what kind of test signals are communicated between the single-use module and the reusable module. Claim 12 recites "a user interface capable of indicating a test result", which is vague because it is unclear how the interface provides an indication (visually, audibly, etc.) or what kind of test result is indicated.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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1. Claims 1-4 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Sampas (US 6,750,963).

Sampas teaches a test system comprising: a light source for illuminating a medium containing a sample under test, wherein the sample medium comprises a labeling substance that binds a persistent fluorescent structure of a quantum dot (col. 12, lines 18-31) to a target analyte (col. 2, lines 61-65; col. 4, lines 20-30); and a first photodetector positioned to measure light at a frequency characteristic of fluorescent light resulting from the light source illuminating the persistent fluorescent structure (col. 9, lines 47-65) from a test area of the medium (col. 2, lines 61-65). Sampas teaches the medium comprising a lateral-flow strip for performing a binding assay, and the test area containing an immobilized substance that binds to and holds a complex including the labeling substance and the target analyte (col. 4, lines 43-46; col. 13, lines 39-44).

Regarding claim 9, Sampas teaches the first photodetector comprising a portion of an imaging array that captures an image containing the test area of the medium (col. 1, lines 9-11).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sampas (US 6,750,963) in view of Kunz (US 5,442,169).

Sampas, as applied to claim 1, teaches a test system and use of more than one detector (col. 9, lines 54-55). However, Sampas fails to specifically teach a second photodetector and an optical system separating light having a first and second frequency.

Kunz teaches a second photodetector (70 and 70', Fig. 19; col. 5, line 35; col. 21, lines 61-71); and an optical system positioned to receive light from the test area, wherein the optical system separates light having a first frequency from light having a second frequency so that the first photodetector measures light having the first frequency and the second photodetector measures light having the second frequency (col. 21, lines 43-48), in order to measure a reference beam and a measuring beam.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in the test system of Sampas, a second photodetector as taught by Kunz, in order to over-sample targets permitting discrimination against non-uniformities.

Further regarding claim 5, the claim recites the optical system separating light, which is drawn to a method and does not recite any further product limitations required to perform the separation. Therefore, the optical system of Kunz would be capable of performing the separation of two frequencies of light.

With respect to claim 6, Kunz teach an optical system comprising a diffractive element (col. 25, lines 21-25), the diffractive element would be capable of directing the light of a first

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frequency onto a first photodetector and directing the light of the second frequency onto a second photodetector.

Regarding claim 7, Kunz teaches the optical system comprising a color (optical) filter that filters out a suitable spectrum from a broad band light source (col. 6, lines 32-49), which would transmit light having one of the first and second frequencies and reflect light having the other of the first and second frequencies.

With respect to claim 8, Sampas teaches the light source illuminating labeling substances at respective frequencies (col. 12, lines 18-30), which would inherently cause the quantum dot to be illuminated at a first frequency and a second fluorescent structure to emit light at a second frequency. Furthermore, claim 8 recites the light source illuminating the persistent fluorescence structure, which is drawn to a method and does not recite any further product limitations required to perform the method of illumination. Therefore, the product of Sampas in view of Kunz would be capable of performing illumination of fluorescent structures.

3. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sampas (US 6,750,963) in view of Allen et al. (US 5,837,546).

Sampas, as applied to claim 1, teaches a test system, but fails to teach the first photodetector and the medium contained in a single-use module.

Allen et al. teach a detector (col. 3, lines 15-20) and medium (col.3, lines 8-10) contained in a disposable module (col.1, lines 30-32) in order to determine the amount of one or more analytes in a body fluid.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in the test system of Sampas, the detector and medium

contained in a single-use module as taught by Allen et al., in order to provide on-site testing in remote locations.

Allen et al. also teach a reusable module having a receptacle into which the single-use module can be inserted for communication of test signals between the single-use module and the reusable module (single-use module, Fig. 6 and 7, reusable module outside casing, parts 62 and 64, shown in Fig. 4). Allen et al. teach the electronic components, such as the outside housing for display can be reused while the inside components are disposable, therefore the single-use module would be inserted into the reusable module for communication (col. 48-53). Claim 12 recites the reusable module implementing a user interface, which is drawn to a method and does not recite any further product claims, the reusable module of Allen et al. would be capable of implementing a user interface for indicating test results (housing of the photodetector and test strip (62 and 64, Fig. 4).

### ***Conclusion***

No claims are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Yu whose telephone number is (571) 272-2933. The examiner can normally be reached on M-F 8:30-5.

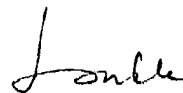
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melanie Yu  
Patent Examiner  
Art Unit 1641



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02/15/05